How long does it take for an EIS to go through all the reviews, from beginning to end?

The public comment period ranges from a minimum of 30 to 45 days. The overall process can take several months or longer depending on the complexity of the project.

Once DEQ approves a permit, can the permittee make any changes to their plans or their plant without obtaining another permit? Will the plant be able to expand without going through another permit request?

If an air quality permit is issued to a coal-fired plant owner, the facility would be required to comply with all emissions standards, monitoring, and recordkeeping requirements. Any changes to the design of the plant which could increase emissions or potentially alter the monitoring of emissions would require a permit modification. Permit modifications would be open for public review prior to final issuance.

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COAL-FIRED POWER PLANTS

Questions and Answers on Health, Environmental, and Permitting Issues

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COAL-FIRED POWER PLANTS

A proposal to build a coal-fired power plant in south central Idaho in 2006 engendered many questions from the public regarding the health, environmental, and permitting issues involved with a coal-fired plant. This publication has been prepared to answer some of the questions the community raised with District Health officials regarding such plants. Environmental and permitting content for this publication has been provided by the Idaho Department of Environmental Quality, while health information has been provided by South Central District Health and the Idaho Department of Health and Welfare.

HEALTH ISSUES

What are the potential long term health risks from coal-fired power plants? Who will be at greatest risk?

Certain groups are more at risk than others when exposed to chemical releases from coal-fired power plants. They include persons with respiratory disease, pregnant women, and fetuses. Whether exposure to emissions will harm a person's health depends on a number of factors: the chemical form of the emission, the dose, the age of the person exposed, how long they are exposed, how they are exposed (through inhalation, ingestion, contact with the skin, etc.), and the health of the person exposed.

What are the primary emissions from coal-fired power plants and how do they affect people's health?

The primary coal-fired power plant emissions are sulfur dioxide, carbon monoxide, nitrogen oxides, particulate matter, and mercury. The best we can do at the present time, without the specific estimates of emissions from a plant, is to describe in general terms what health affects the constituents can cause. Examples include:

Sulfur dioxide is a gas that leads to haze and acid rain. High levels — 100 parts per million (ppm) of air — is considered immediately dangerous to life and health. Changes in lung function have been observed in workers exposed to 0.4-3.0 ppm for 20 years or more. Additionally, exercising people who have asthma are sensitive to the respiratory effects of concentrations of sulfur dioxide as low as 0.25 ppm. The typical outdoor concentrations of sulfur dioxide range from 0 to 1 ppm.

Nitrogen oxides can react with volatile organic compounds (VOCs) in the presence of heat and sunlight to form Ozone (smog). Children, the elderly, people with lung diseases such as asthma, and people who work or exercise outside are susceptible to adverse effects such as damage to lung tissue and reduction in lung functions.

Mercury can damage the nervous system and kidneys. The impact of mercury is greatest on children and fetuses during critical periods of development. Researchers are currently studying the potential for less serious developmental effects, including effects on a child's behavior and ability to learn, think, and solve problems. The main source of exposure to methylmercury for pregnant women and young children is from eating fish.

A detailed description, compiled by the Idaho Department of Health and Welfare, Division of Health, of the potential health impacts from worse to best case scenarios is available on the South Central District Health website.

What kinds of pollution control devices could be installed on a coal-fired power plant?

Various types of boilers and pollution control devices can be effective at limiting emissions.

In addition, air quality operating permits are designed to assure that emissions comply with health-based standards set in the National Ambient Air Quality Standards (NAAQS).

Is there the potential for acid rain?

Sulfur dioxide (SO2) and nitrogen oxides (NOx) are the primary causes of acid rain. Acid rain occurs when these gases react in the atmosphere with water, oxygen, and other chemicals to form various acidic compounds. Sunlight increases the rate of most of these reactions. The U.S. Environmental Protection Agency (EPA) reports that about two-thirds of all SO2 and one-quarter of all NOx in the U.S. comes from electric power generation that relies on burning fossil fuels like coal. There are several options for reducing SO2 emissions, including using coal containing less sulfur, washing the coal, and using devices called scrubbers to chemically remove the SO2 from the gases leaving the smokestack.

Will our area look like Pittsburgh in the 1960's, all sooty and dirty?

No. The U.S. has implemented numerous laws in the past 40 years to protect the environment, including the Clean Air and Clean Water Acts. These laws assure that today's environment is significantly cleaner than that of the 1960s. Moreover, technological advances have resulted in significant improvements in our ability to control the emissions that were responsible for air pollution in the 1960s.

Environmental Issues

Will the plant contaminate the air?

All coal-fired power plants produce air pollution. The amount of pollution that can be generated is limited, however, by federal and state laws, regulations, and rules. These restrictions are based on scientifically tested standards designed to protect human health and the environment. Various types of boilers and pollution control devices can be employed at the plant to limit emissions.

Will the plant contaminate the groundwater?

Waste generated by coal-fired power plants in some states has been associated with ground water pollution. Because most of Idaho's drinking water comes from ground water, however, our state has rules designed to protect ground water from contamination. It is illegal in Idaho to cause or allow the release of a contaminant (anything that does not occur naturally or naturally occurs only in very small quantities) into the environment in a manner that causes the ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order, or applicable best management practice, best available method, or best practical method. These rules require that waste be disposed of in a manner that will not harm ground water.

Are the standards the plant has to meet adequate to protect human health?

EPA has established health and technology-based standards for air pollutants to protect the health and welfare of people, plants, and animals and to ensure that the best technologies are being used to reduce emissions. Standards for pollutants are based on current scientific data and studies, and are designed to protect the most sensitive populations. Those most likely to be affected by air pollution include the elderly, children, and people with existing respiratory problems. It also includes active, healthy adults who work or exercise outdoors. The standards are reviewed every five years to reflect new studies and scientific data on health impacts.

We already have mercury in the fish in some of our reservoirs. Will this coal-fired power plant increase the level of mercury over what is currently present in our surface water?

Mercury emissions from a coal-fired power plant would be limited by the air quality operating permit it would be required to obtain from the Idaho Department of Environmental Quality (DEQ). It is important to note, however, that mercury emissions are not limited by regional, state, national, or continental boundaries. Mercury can travel thousands of miles in the atmosphere before it is eventually deposited back to the earth in rainfall or in dry gaseous forms. We know that mercury levels in various water bodies exceed DEQ's fish-tissue criteria. DEQ is currently conducting a pilot study to determine the source of mercury contamination in these areas.

Will DEQ routinely monitor plants to make sure they aren't contaminating the environment?

Under the Tier I air quality operating permit program, facilities in Idaho are required to report to DEQ every six months on the status of compliance with the conditions of their permit. Specifically, facilities are required to report on their compliance methods, monitoring frequency, deviations from the standard and excess emissions, and compliance status. The purpose of the reporting requirements is to assure compliance with permit provisions. Reports are due semiannually and annually. In addition, physical inspections and document/file reviews of all Tier I sources of pollution are conducted annually by DEQ staff to ensure that environmental protection requirements and permit operating conditions are being met.

Permitting Issues

What role does the Idaho Dept. of Environmental Quality (DEQ) play in the permitting process?

DEQ is the state agency delegated by the federal government to issue air quality permits in Idaho. Permits are required by the federal Clean Air Act and set the conditions under which facilities that generate air pollution may operate. The purpose of permits is to ensure compliance with all state and federal air pollution control rules, which are designed to protect public health and the environment.

Any business or industry (source) in Idaho that emits, or has the potential to emit, pollutants above a certain level into the air is required to have an air pollution control permit from DEQ. Permits are issued before new sources begin construction or when existing sources modify their facilities. When sources demonstrate compliance with air quality standards, DEQ is required by law to issue an air quality permit.

Will the public be able to review the request for permit for a coal-fired power plant?

DEQ will notify the public when a complete air quality permit to construct application has been submitted for review. A public notice will be printed in the local newspaper. The notice will provide information on where to view or how to obtain copies of the application. This information will also be posted on DEQ's Web site.

Will I, as a resident, have a chance to comment before a proposed plant receives their permit? Will there be an opportunity to address my concerns with state officials and plant developers? How and when?

The plant owner would be required to apply for a major source construction permit. Idaho air quality rules require a public notice and 30-day public comment period on any major source construction permit prior to a final agency decision. A public notice would be printed in the local newspaper with instructions on how to obtain a copy of the comment package and how to make comments on a draft permit. The comment package would include all application materials, DEQ's technical analysis, and the draft permit. The public can also visit DEQ's Web site or a local DEQ office to obtain additional information.

What kinds of issues does an Environmental Impact Statement (EIS) cover? Will the public be able to review the EIS that a plant owner submits?

Environmental impact statements (EISs) are a federal, not a state, responsibility; therefore, DEQ does not issue EISs. Under the federal National Environmental Protection Act (NEPA), federal agencies are required to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements, commonly referred to as EISs, include discussions of the purpose of and need for the action, alternatives, the affected environment, and the environmental consequences of the proposed action.

The public has an important role in the NEPA process, particularly during the "scoping" period, in providing input on what issues should be addressed in an EIS and in commenting on the findings in an agency's NEPA documents. The public can participate in the NEPA process by attending NEPA-related hearings or public meetings and by submitting comments directly to the lead federal agency. The lead agency must take into consideration all comments received from the public and other parties on NEPA documents during the comment period.